#9

Ru/09

P.6

ENTERED

RAW SEQUENCE LISTING   DATE: 08/26/2002
PATENT APPLICATION: US/09/831,088A   TIME: 14:36:51

Input Set : A:\pf0622usn_seqlist.txt
Output Set: N:\CRF3\08262002\I831088A.raw

```
 4 <110> APPLICANT: INCYTE PHARMACEUTICALS, INC.
 5       TANG, Y. Tom
 6       CORLEY, Neil C.
 7       GUEGLER, Karl J.
 8       GORGONE, Gina A.
 9       AZIMZAI, Yalda
10       KASER, Matthew R.
11       YUE, Henry
13 <120> TITLE OF INVENTION: COENZYME A-UTILIZING ENZYMES
15 <130> FILE REFERENCE: PF-0622 PCT
```
C--> ```17 <140> CURRENT APPLICATION NUMBER: US/09/831,088A```
C--> ```18 <141> CURRENT FILING DATE: 2002-08-26```
```
20 <150> PRIOR APPLICATION NUMBER: 09/185,217; unassigned
```
W--> ```21 <151> PRIOR FILING DATE: 1998-11-03; 1998-11-03```
```
23 <160> NUMBER OF SEQ ID NOS: 10
25 <170> SOFTWARE: PERL Program
27 <210> SEQ ID NO: 1
28 <211> LENGTH: 100
29 <212> TYPE: PRT
30 <213> ORGANISM: Homo sapiens
32 <220> FEATURE:
33 <221> NAME/KEY: misc_feature
34 <223> OTHER INFORMATION: Incyte ID No: 1580751CD1
36 <400> SEQUENCE: 1
37 Met Lys Gly Ala Thr Thr Asn Ile Cys Tyr Asn Val Leu Asp Arg
38  1               5                  10                  15
39 Asn Val His Glu Lys Lys Leu Gly Asp Lys Val Ala Phe Tyr Trp
40                  20                  25                  .30
41 Pro Cys Gln Arg Asp Gln Asp Gly Tyr Tyr Trp Ile Thr Gly Arg
42                  35                  40                  45
43 Ile Asp Asp Met Leu Asn Val Ser Gly Glu Gly Gln Gly Pro Pro
44                  50                  55                  60
45 Ser His Leu Ile Asn Ser Ala Pro Leu Thr Thr Pro Ser Arg Ser
46                  65                  70                  75
47 Leu Pro Gln Glu Pro Arg Ser Val Leu Trp Pro Asp His Val Leu
48                  80                  85                  90
49 Ser Val Ala Phe Ser Ser Gly Pro Arg Phe
50                  95                  100
54 <210> SEQ ID NO: 2
55 <211> LENGTH: 159
56 <212> TYPE: PRT
57 <213> ORGANISM: Homo sapiens
59 <220> FEATURE:
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RAW SEQUENCE LISTING   DATE: 08/26/2002
PATENT APPLICATION: US/09/831,088A   TIME: 14:36:51

Input Set : **A:\pf0622usn_seqlist.txt**
Output Set: **N:\CRF3\08262002\I831088A.raw**

```
60 <221> NAME/KEY: misc_feature
61 <223> OTHER INFORMATION: Incyte ID No: 1627889CD1
63 <400> SEQUENCE: 2
64 Met Ser Gly Gln Gly Val Asp Arg His Leu Phe Ala Leu Tyr Ile
65   1               5                   10                  15
66 Val Ser Arg Phe Leu His Leu Gln Ser Pro Phe Leu Thr Gln Val
67                 20                  25                  30
68 His Ser Glu Gln Trp Gln Leu Ser Thr Ser Gln Ile Pro Val Gln
69                 35                  40                  45
70 Gln Met His Leu Phe Asp Val His Asn Tyr Pro Asp Tyr Val Ser
71                 50                  55                  60
72 Ser Gly Gly Gly Phe Gly Pro Ala Asp Asp His Gly Tyr Gly Val
73                 65                  70                  75
74 Ser Tyr Ile Phe Met Gly Asp Gly Met Ile Thr Phe His Ile Ser
75                 80                  85                  90
76 Ser Lys Lys Ser Ser Thr Lys Thr Asp Ser His Arg Leu Gly Gln
77                 95                  100                 105
78 His Ile Glu Asp Ala Leu Leu Asp Val Ala Ser Leu Phe Gln Ala
79                 110                 115                 120
80 Gly Gln His Phe Lys Arg Arg Phe Arg Gly Ser Gly Lys Glu Asn
81                 125                 130                 135
82 Ser Arg His Arg Cys Gly Phe Leu Ser Arg Gln Thr Gly Ala Ser
83                 140                 145                 150
84 Lys Ala Ser Met Thr Ser Thr Asp Phe
85                 155
88 <210> SEQ ID NO: 3
89 <211> LENGTH: 215
90 <212> TYPE: PRT
91 <213> ORGANISM: Homo sapiens
93 <220> FEATURE:
94 <221> NAME/KEY: misc_feature
95 <223> OTHER INFORMATION: Incyte ID No: 1965888CD1
97 <400> SEQUENCE: 3
98 Met Asn Arg Pro Ser Ala Arg Asn Ala Leu Gly Asn Val Phe Val
99   1               5                   10                  15
100 Ser Glu Leu Leu Glu Thr Leu Ala Gln Leu Arg Glu Asp Arg Gln
101                 20                  25                  30
102 Val Arg Val Leu Leu Phe Arg Ser Gly Val Lys Gly Val Phe Cys
103                 35                  40                  45
104 Ala Gly Ala Asp Leu Lys Glu Arg Glu Gln Met Ser Glu Ala Glu
105                 50                  55                  60
106 Val Gly Val Phe Val Gln Arg Leu Arg Gly Leu Met Asn Asp Ile
107                 65                  70                  75
108 Ala Ser Ser Ala Val Met Gly Leu Ile Glu Thr Thr Arg Gly Leu
109                 80                  85                  90
110 Leu Pro Gly Ala Gly Gly Thr Gln Arg Leu Pro Arg Cys Leu Gly
111                 95                  100                 105
112 Val Ala Leu Ala Lys Glu Leu Ile Phe Thr Gly Arg Arg Leu Ser
113                 110                 115                 120
```

RAW SEQUENCE LISTING   DATE: 08/26/2002
PATENT APPLICATION: US/09/831,088A   TIME: 14:36:51

Input Set : A:\pf0622usn_seqlist.txt
Output Set: N:\CRF3\08262002\I831088A.raw

```
114 Gly Thr Glu Ala His Val Leu Gly Leu Val Asn His Ala Val Ala
115                 125                 130                 135
116 Gln Asn Glu Glu Gly Asp Ala Ala Tyr Gln Arg Ala Arg Ala Leu
117                 140                 145                 150
118 Ala Gln Glu Ile Leu Pro Gln Ala Pro Ile Ala Val Arg Leu Gly
119                 155                 160                 165
120 Lys Val Ala Ile Asp Arg Gly Thr Glu Val Asp Ile Ala Ser Gly
121                 170                 175                 180
122 Met Ala Ile Glu Gly Met Cys Tyr Ala Gln Asn Ile Pro Thr Arg
123                 185                 190                 195
124 Asp Arg Leu Glu Gly Met Ala Ala Phe Arg Glu Lys Arg Thr Pro
125                 200                 205                 210
126 Lys Phe Val Gly Lys
127                 215
130 <210> SEQ ID NO: 4
131 <211> LENGTH: 720
132 <212> TYPE: PRT
133 <213> ORGANISM: Homo sapiens
135 <220> FEATURE:
136 <221> NAME/KEY: misc_feature
137 <223> OTHER INFORMATION: Incyte ID No: 2816341CD1
139 <400> SEQUENCE: 4
140 Met Asn Asn His Val Ser Ser Lys Pro Ser Thr Met Lys Leu Lys
141   1               5                  10                  15
142 His Thr Ile Asn Pro Ile Leu Leu Tyr Phe Ile His Phe Leu Ile
143                 20                  25                  30
144 Ser Leu Tyr Thr Ile Leu Thr Tyr Ile Pro Phe Tyr Phe Phe Ser
145                 35                  40                  45
146 Glu Ser Arg Gln Glu Lys Ser Asn Arg Ile Lys Ala Lys Pro Val
147                 50                  55                  60
148 Asn Ser Lys Pro Asp Ser Ala Tyr Arg Ser Val Asn Ser Leu Asp
149                 65                  70                  75
150 Gly Leu Ala Ser Val Leu Tyr Pro Gly Cys Asp Thr Leu Asp Lys
151                 80                  85                  90
152 Val Phe Thr Tyr Ala Lys Asn Lys Phe Lys Asn Lys Arg Leu Leu
153                 95                  100                 105
154 Gly Thr Arg Glu Val Leu Asn Glu Glu Asp Glu Val Gln Pro Asn
155                 110                 115                 120
156 Gly Lys Ile Phe Lys Lys Val Ile Leu Gly Gln Tyr Asn Trp Leu
157                 125                 130                 135
158 Ser Tyr Glu Asp Val Phe Val Arg Ala Phe Asn Phe Gly Asn Gly
159                 140                 145                 150
160 Leu Gln Met Leu Gly Gln Lys Pro Lys Thr Asn Ile Ala Ile Phe
161                 155                 160                 165
162 Cys Glu Thr Arg Ala Glu Trp Met Ile Ala Ala Gln Ala Cys Phe
163                 170                 175                 180
164 Met Tyr Asn Phe Gln Leu Val Thr Leu Tyr Ala Thr Leu Gly Gly
165                 185                 190                 195
166 Pro Ala Ile Val His Ala Leu Asn Glu Thr Glu Val Thr Asn Ile
```

RAW SEQUENCE LISTING   DATE: 08/26/2002
PATENT APPLICATION: US/09/831,088A   TIME: 14:36:51

Input Set : A:\pf0622usn_seqlist.txt
Output Set: N:\CRF3\08262002\I831088A.raw

```
167              200              205              210
168 Ile Thr Ser Lys Glu Leu Leu Gln Thr Lys Leu Lys Asp Ile Val
169              215              220              225
170 Ser Leu Val Pro Arg Leu Arg His Ile Ile Thr Val Asp Gly Lys
171              230              235              240
172 Pro Pro Thr Trp Ser Glu Phe Pro Lys Gly Ile Ile Val His Thr
173              245              250              255
174 Met Ala Ala Val Glu Ala Leu Gly Ala Lys Ala Ser Met Glu Asn
175              260              265              270
176 Gln Pro His Ser Lys Pro Leu Pro Ser Asp Ile Ala Val Ile Met
177              275              280              285
178 Tyr Thr Ser Gly Ser Thr Gly Leu Pro Lys Gly Val Met Ile Ser
179              290              295              300
180 His Ser Asn Ile Ile Ala Gly Ile Thr Gly Met Ala Glu Arg Ile
181              305              310              315
182 Pro Glu Leu Gly Glu Glu Asp Val Tyr Ile Gly Tyr Leu Pro Leu
183              320              325              330
184 Ala His Val Leu Glu Leu Ser Ala Glu Leu Val Cys Leu Ser His
185              335              340              345
186 Gly Cys Arg Ile Gly Tyr Ser Ser Pro Gln Thr Leu Ala Asp Gln
187              350              355              360
188 Ser Ser Lys Ile Lys Lys Gly Ser Lys Gly Asp Thr Ser Met Leu
189              365              370              375
190 Lys Pro Thr Leu Met Ala Ala Val Pro Glu Ile Met Asp Arg Ile
191              380              385              390
192 Tyr Lys Asn Val Met Asn Lys Val Ser Glu Met Ser Ser Phe Gln
193              395              400              405
194 Arg Asn Leu Phe Ile Leu Ala Tyr Asn Tyr Lys Met Glu Gln Ile
195              410              415              420
196 Ser Lys Gly Arg Asn Thr Pro Leu Cys Asp Ser Phe Val Phe Arg
197              425              430              435
198 Lys Val Arg Ser Leu Leu Gly Gly Asn Ile Arg Leu Leu Leu Cys
199              440              445              450
200 Gly Gly Ala Pro Leu Ser Ala Thr Thr Gln Arg Phe Met Asn Ile
201              455              460              465
202 Cys Phe Cys Cys Pro Val Gly Gln Gly Tyr Gly Leu Thr Glu Ser
203              470              475              480
204 Ala Gly Ala Gly Thr Ile Ser Glu Val Trp Asp Tyr Asn Thr Gly
205              485              490              495
206 Arg Val Gly Ala Pro Leu Val Cys Cys Glu Ile Lys Leu Lys Asn
207              500              505              510
208 Trp Glu Glu Gly Gly Tyr Phe Asn Thr Asp Lys Pro His Pro Arg
209              515              520              525
210 Gly Glu Ile Leu Ile Gly Gly Gln Ser Val Thr Met Gly Tyr Tyr
211              530              535              540
212 Lys Asn Glu Ala Lys Thr Lys Ala Asp Phe Phe Glu Asp Glu Asn
213              545              550              555
214 Gly Gln Arg Trp Leu Cys Thr Gly Asp Ile Gly Glu Phe Glu Pro
215              560              565              570
```

RAW SEQUENCE LISTING   DATE: 08/26/2002
PATENT APPLICATION: US/09/831,088A   TIME: 14:36:51

Input Set : A:\pf0622usn_seqlist.txt
Output Set: N:\CRF3\08262002\I831088A.raw

```
216 Asp Gly Cys Leu Lys Ile Ile Asp Arg Lys Lys Asp Leu Val Lys
217             575                 580                 585
218 Leu Gln Ala Gly Glu Tyr Val Ser Leu Gly Lys Val Glu Ala Ala
219             590                 595                 600
220 Leu Lys Asn Leu Pro Leu Val Asp Asn Ile Cys Ala Tyr Ala Asn
221             605                 610                 615
222 Ser Tyr His Ser Tyr Val Ile Gly Phe Val Val Pro Asn Gln Lys
223             620                 625                 630
224 Glu Leu Thr Glu Leu Ala Arg Lys Lys Gly Leu Lys Gly Thr Trp
225             635                 640                 645
226 Glu Glu Leu Cys Asn Ser Cys Glu Met Glu Asn Glu Leu Leu Lys
227             650                 655                 660
228 Val Leu Ser Glu Ala Ala Ile Ser Ala Ser Leu Glu Lys Phe Glu
229             665                 670                 675
230 Ile Leu Val Lys Ile Arg Leu Ser Pro Glu Pro Trp Thr Pro Glu
231             680                 685                 690
232 Thr Gly Leu Val Thr Asp Ala Phe Lys Leu Lys Arg Lys Glu Leu
233             695                 700                 705
234 Lys Thr His Tyr Gln Ala Asp Ile Glu Arg Met Tyr Gly Arg Lys
235             710                 715                 720
238 <210> SEQ ID NO: 5
239 <211> LENGTH: 456
240 <212> TYPE: PRT
241 <213> ORGANISM: Homo sapiens
243 <220> FEATURE:
244 <221> NAME/KEY: misc_feature
245 <223> OTHER INFORMATION: Incyte ID No: 3324214CD1
247 <400> SEQUENCE: 5
248 Met Phe Leu Leu Leu Thr Phe Asp Ser Leu Ile Val Asn Leu Leu
249   1             5                 10                15
250 Gly Ile Ser Leu Thr Val Leu Phe Thr Leu Leu Leu Val Phe Ile
251             20                 25                30
252 Ile Val Pro Ala Ile Phe Gly Val Ser Phe Gly Ile Arg Lys Leu
253             35                 40                45
254 Tyr Met Lys Ser Leu Leu Lys Ile Phe Ala Trp Ala Thr Leu Arg
255             50                 55                60
256 Met Glu Arg Gly Ala Lys Glu Lys Asn His Gln Leu Tyr Lys Pro
257             65                 70                75
258 Tyr Thr Asn Gly Ile Ile Ala Lys Asp Pro Thr Ser Leu Glu Glu
259             80                 85                90
260 Glu Ile Lys Glu Ile Arg Arg Ser Gly Ser Ser Lys Ala Leu Asp
261             95                 100               105
262 Asn Thr Pro Glu Phe Glu Leu Ser Asp Ile Phe Tyr Phe Cys Arg
263             110                115               120
264 Lys Gly Met Glu Thr Ile Met Asp Asp Glu Val Thr Lys Arg Phe
265             125                130               135
266 Ser Ala Glu Glu Leu Glu Ser Trp Asn Leu Leu Ser Arg Thr Asn
267             140                145               150
268 Tyr Asn Phe Gln Tyr Ile Ser Leu Arg Leu Thr Val Leu Trp Gly
```

RAW SEQUENCE LISTING ERROR SUMMARY   DATE: 08/26/2002
PATENT APPLICATION: **US/09/831,088A**   TIME: 14:36:52

Input Set : **A:\pf0622usn_seqlist.txt**
Output Set: **N:\CRF3\08262002\I831088A.raw**

<u>Please Note:</u>
Use of n and/or Xaa have been detected in the Sequence Listing. Please review the
Sequence Listing to ensure that a corresponding explanation is presented in the <220>
to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:6; N Pos. 63
Seq#:10; N Pos. 1597,1650,1656,1713,1719,1754,1778,1791,1794,1796,1800

VERIFICATION SUMMARY   DATE: 08/26/2002
PATENT APPLICATION: US/09/831,088A   TIME: 14:36:52

Input Set : **A:\pf0622usn_seqlist.txt**
Output Set: **N:\CRF3\08262002\I831088A.raw**

```
L:17 M:270 C: Current Application Number differs, Replaced Current Application Number
L:18 M:271 C: Current Filing Date differs, Replaced Current Filing Date
L:21 M:256 W: Invalid Numeric Header Field, Wrong Prior FILING DATE:YYYY-MM-DD
L:328 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:6 after pos.:60
L:516 M:258 W: Mandatory Feature missing, <220> not found for SEQ ID#:10
L:543 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:10 after pos.:1560
L:544 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:10 after pos.:1620
L:545 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:10 after pos.:1680
L:546 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:10 after pos.:1740
```